

## CLAIMS

What is claimed is:

1. A protein standard comprising a collection of polypeptides wherein;
  - (a) the protein standard contains at least three polypeptides of different size and of different mass;
  - (b) the size of all of the polypeptides in kilo Dalton covers a range of at least separable by a given polyacrylamide gel electrophoresis; and
  - (c) the masses of all of the proteins cover a range of at least detectable by a given detection assay.
2. The protein standard according to claim 1, wherein the polypeptides are from natural sources.
3. The protein standard according to claim 1, wherein the polypeptides are from recombinant sources.
4. The protein standard according to claim 1, wherein the polypeptides are from both natural and recombinant sources.
5. The protein standard according to claim 1, wherein the detecting intensity of the detection assay is related to the polypeptide mass.
6. A protein standard kit comprising a carrier means having in close confinement therein at least one container means where the first container means contains the protein standard according to claim 1.

7. A method of using a protein standard to estimate the size and the mass of the polypeptide in a protein sample comprising:
  - (a) electrophoresing simultaneously in separate lanes on a gel the protein standard of claim 1 and the protein sample;
  - (b) detecting the polypeptides on the gel with a detection assay;
  - (c) comparing the relative positions of polypeptides of said protein standard with the relative position of polypeptide in the protein sample to estimate its size; and
  - (d) comparing the relative detecting intensities of polypeptides of said protein standard with the relative detecting intensity of polypeptide in the protein sample to estimate its mass.
8. The method according to claim 7, wherein the detecting intensity of the detection assay is related to the polypeptide mass.
9. The method according to claim 7, wherein the protein sample contains one or more polypeptides.
10. A method of preparing a protein standard comprising:
  - (a) obtaining a few polypeptides with known sizes;
  - (b) estimating the mass of each of the polypeptides; and
  - (c) combining the polypeptides with different sizes and masses.
11. The method according to claim 10, wherein the protein standard is produced such that the standard contains at least three polypeptides.

12. The method according to claim 10, wherein the polypeptides are from natural sources.
13. The method according to claim 10, wherein the polypeptides are from recombinant sources.
14. The method according to claim 10, wherein the polypeptides are from both natural and recombinant sources.
15. The method according to claim 10, wherein the range of their sizes is separable by a given polyacrylamide gel electrophoresis.
16. The method according to claim 10, wherein the range of their masses is detectable by a given detection assay.
17. The method according to claim 10, wherein the mass of each of the polypeptides is estimated by a protein assay.
18. The protein assay according to claim 17, wherein the detection intensity of the protein assay is related to the polypeptide mass.
19. The method according to claim 10, wherein the mass of each of the polypeptides is estimated by polyacrylamide gel electrophoresis followed by a detection assay.
20. The method according to claim 19, wherein the detection intensity of the detection assay is related to the polypeptide mass.